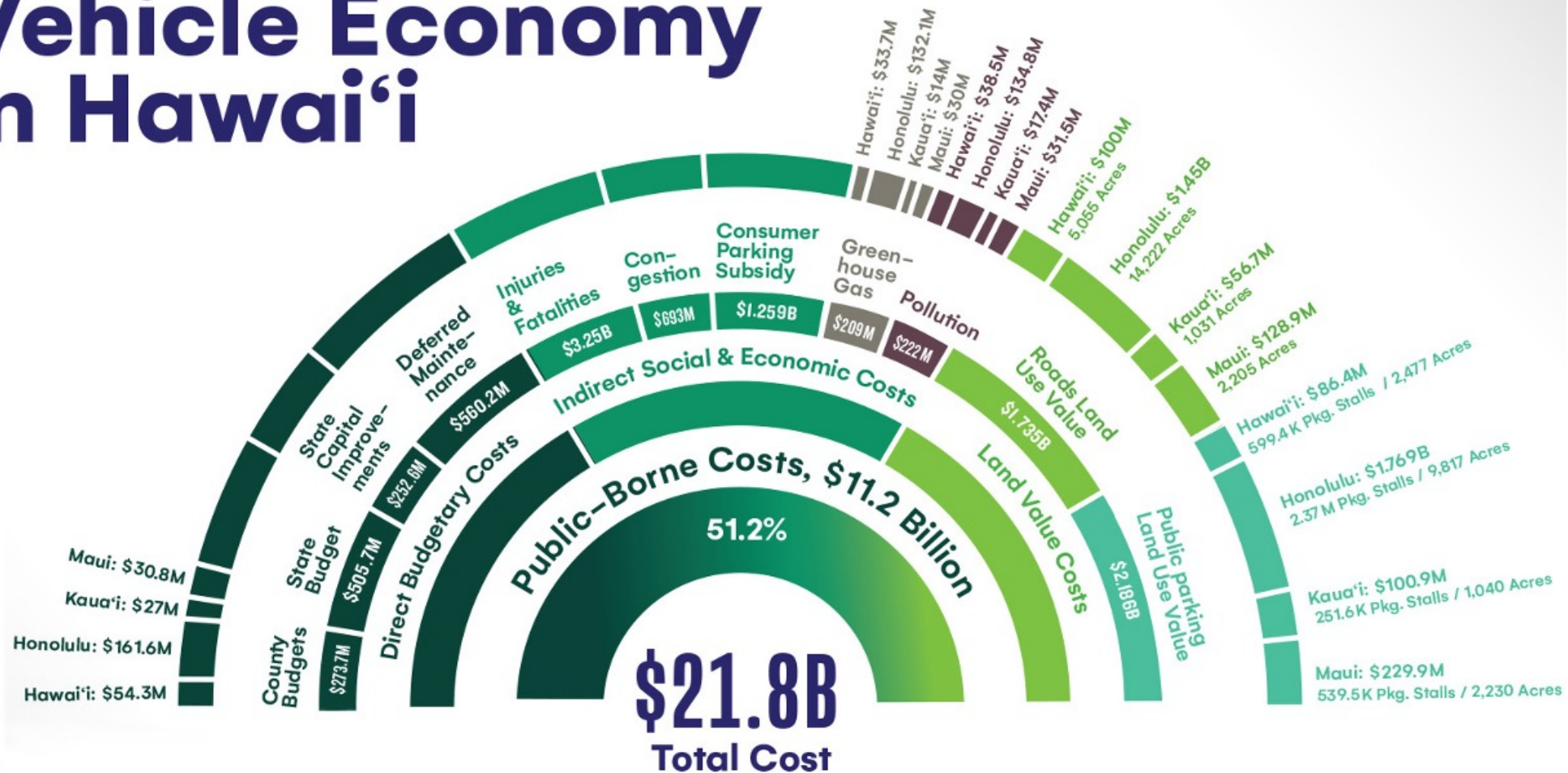


Annual Costs of Vehicle Economy in Hawai'i



Kathleen Rooney
Director of Transportation Policy & Programs

About Ulupono Initiative

TRANSPORTATION

Committed to a **sustainable, resilient** Hawai'i,
we invest, educate and advocate to support:

Local Food



DA BUX Double Up
Food Bucks
Farm Link Hawai'i
Farm-to-School
Hawai'i 'Ulu
Cooperative
OI-HPU Feed Mill

Water & Waste



Aloha Harvest
Fresh Water
Initiative
Re-use Hawai'i
WAI: Wastewater
Alternatives &
Innovations

Renewable Energy



BioEnergy Hawai'i
Carbon Lighthouse
ClearFuels
Ibis Networks
Performance-Based
Regulation
SolarCity

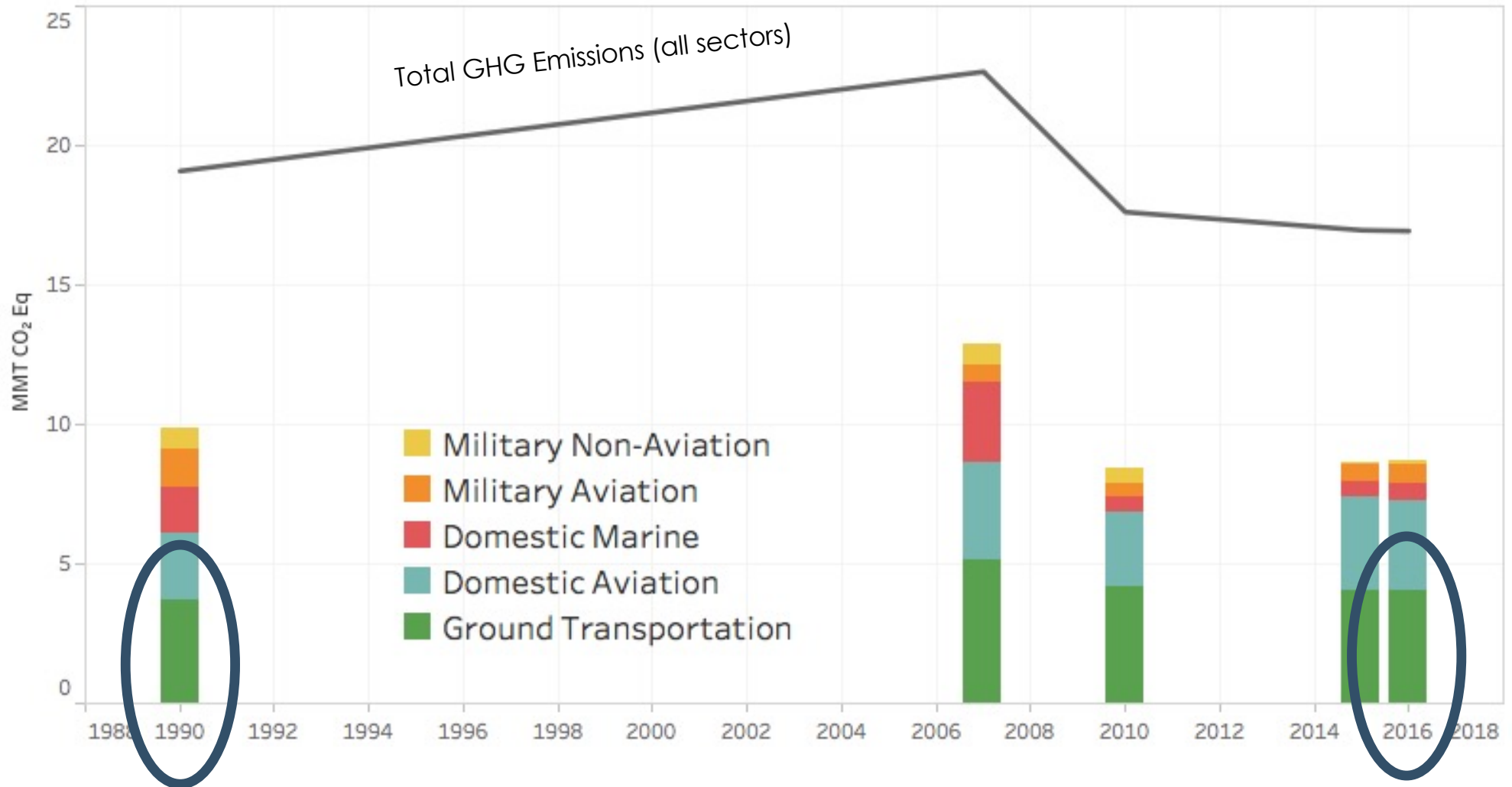
Clean Transportation



Ala Moana Parking
Study
Biki/Bikeshare Hawai'i
Drive Electric Hawai'i
Quick Builds
Volta Charging

We can't become self-sufficient without tackling *ground transportation*

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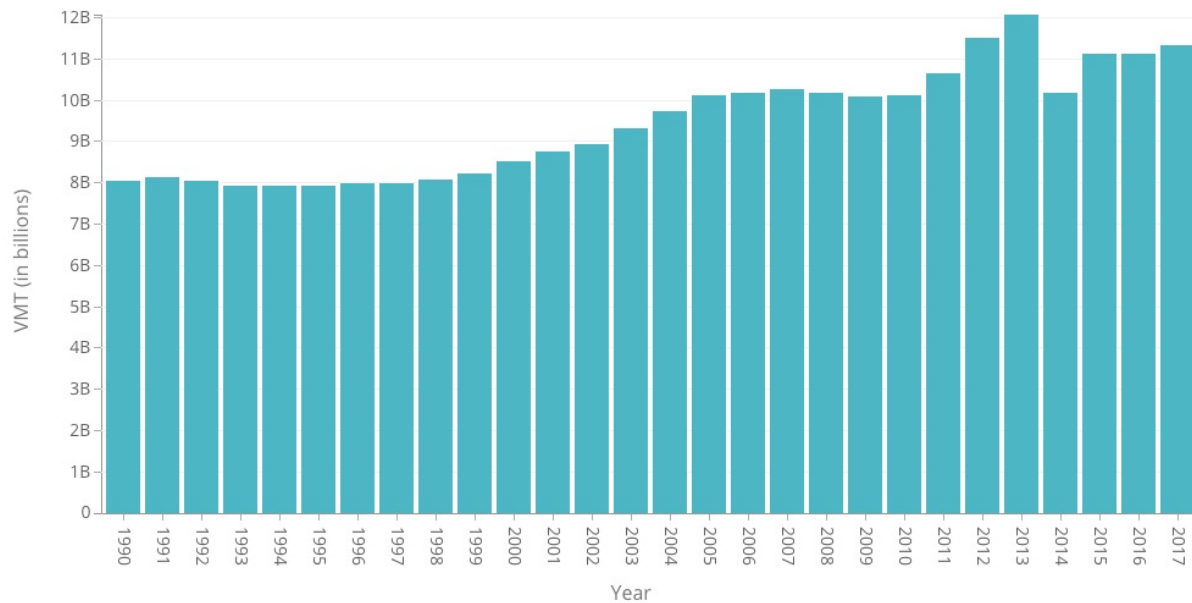


Source: Hawai'i Greenhouse Gas Emissions Report for 2016, Final Report, December 2019

VMT is on the rise and projected to rise more

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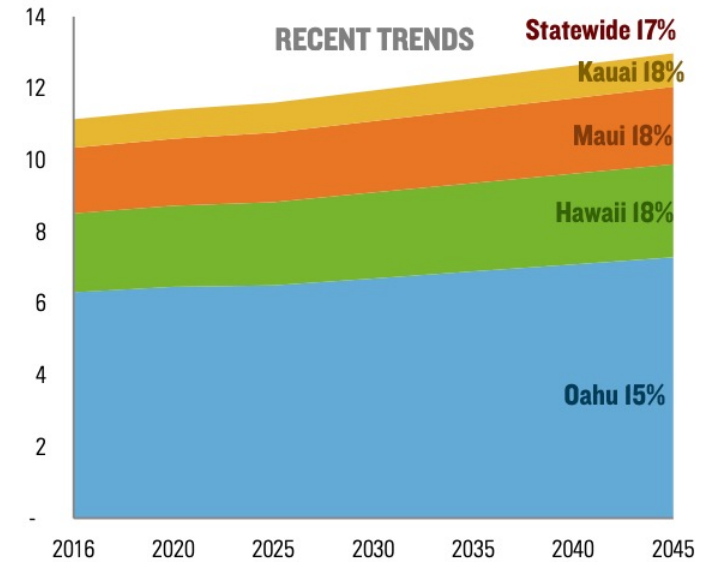
Total Annual Vehicle Miles Travelled (VMT) in the State of Hawai'i



Average 9,400 per capita per year

Figure 3.4: VMT projections by county, 2016-2045

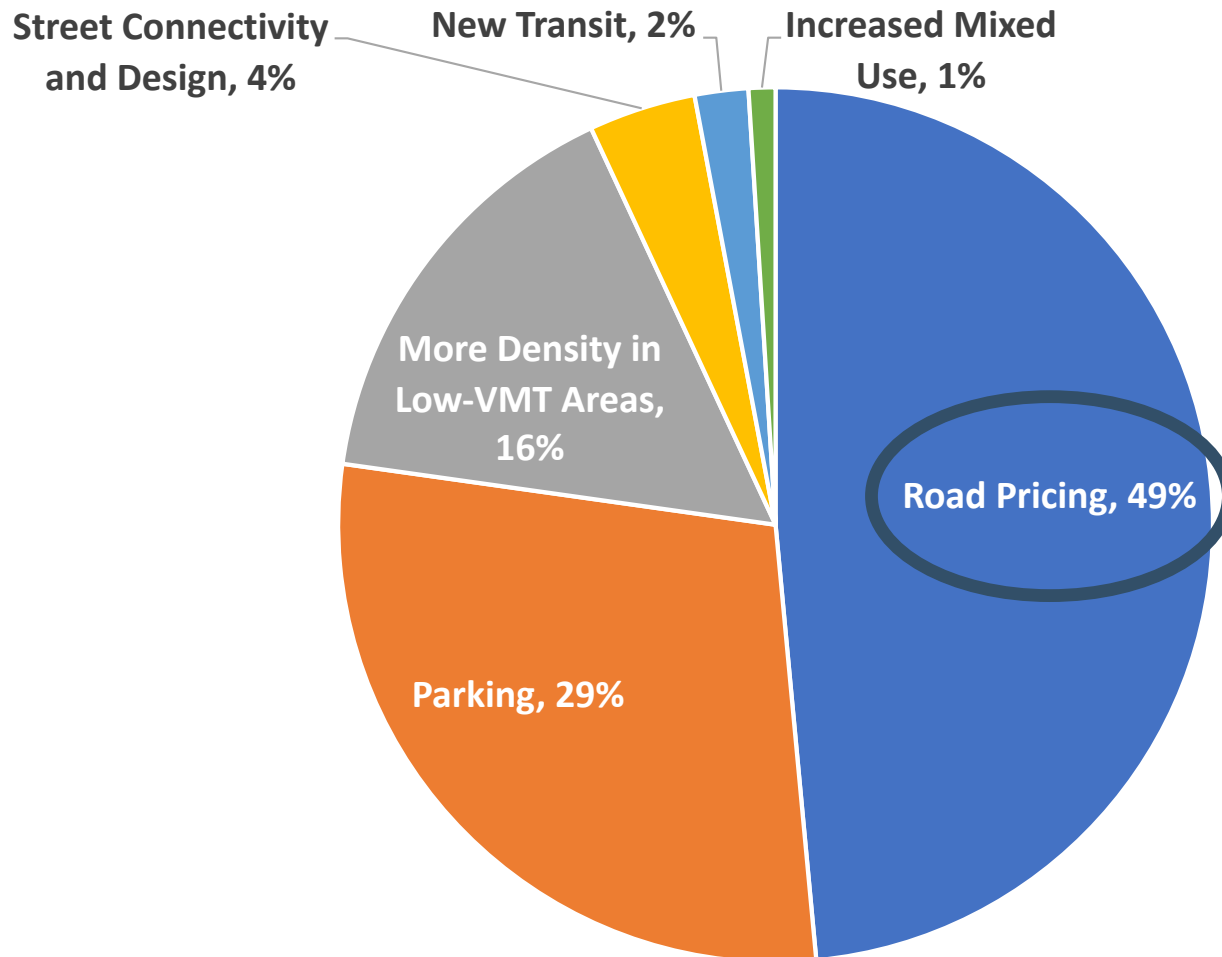
Billion miles traveled



Why deal with VMT?

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IMPACT



The original vehicle economy extrapolation

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\$64.1 billion/year
77,500 lane miles
6.9 million people



\$8-13 billion/year (est.)
9,700 lane miles
1.4 million people

\$4-7 billion/year
(est. public funds)

Definition

The vehicle economy includes: “All roadways, vehicles, and transportation infrastructure costs (e.g., bridges, on-off ramps, signs, speedbumps, parking) as well as the associated costs of pollution and congestion that result from the use of the ground transportation system”



Hawai'i study framework

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- Comprehensive
- Easy and defensible
- Hawai'i-based
- Replicable

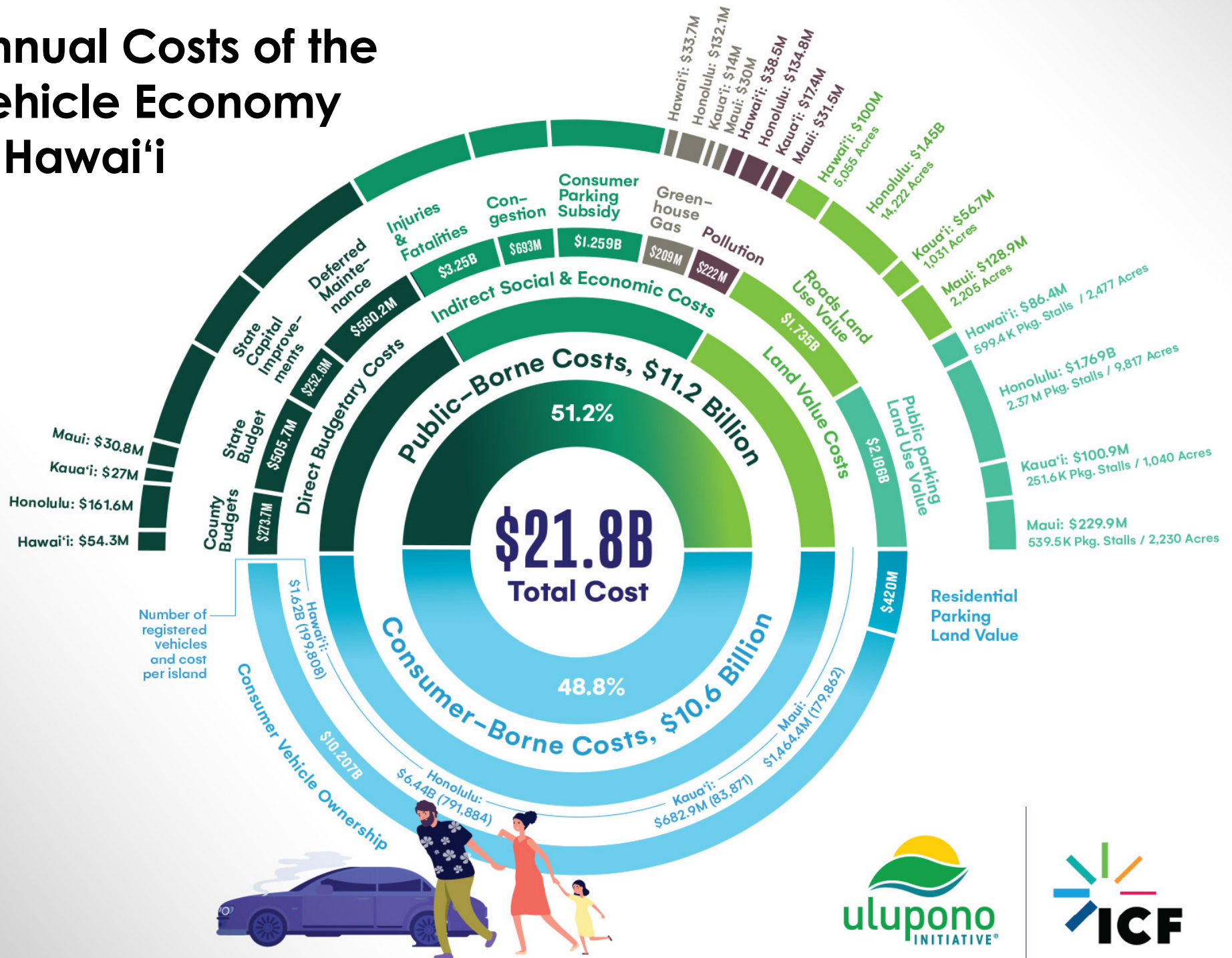


Detailed appendix

Table 13. Cost Component Methodology

Cost Component	Costs ³⁴	Quantification/Monetization Steps	Source ³⁵
Public Borne Costs			
Direct Public Budgetary Costs	<ul style="list-style-type: none"> Road maintenance expenditures Vehicle registration & licensing Road & highway beautification State Capital Improvement Program funding 	<ul style="list-style-type: none"> Average costs for each item from each county for the 5 most recent years available³⁶ Average state budget costs for Hawai'i, Honolulu, Kaua'i, and Maui highways for the 5 most recent years available Average annual capital improvement program disbursements from the FHWA for the 5 most recent years available³⁷ Multiply the capital improvement program disbursements from FHWA by 70% to identify the state and local match 	<p>County-specific budget files:</p> <ul style="list-style-type: none"> County of Hawai'i, "Operating Budget FY 2019-2020," 2019 City and County of Honolulu, "The Executive Program and Budget Fiscal Year 2020: Volume 1—Operating Program & Budget", 2019 Kaua'i County, "Annual Operating Budget Ordinance," 2020 Maui County, "FY 2020 Council Adopted Budget," n.d. <p>State budget file:</p> <ul style="list-style-type: none"> State of Hawai'i Department of Budget and Finance, "Executive

Annual Costs of the Vehicle Economy in Hawai'i



County-based vehicle economies

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County	Cost (Millions of \$)	Percent
Honolulu	\$14,340.8	66%
Hawai'i	\$3,118.9	14%
Maui	\$2,957.7	14%
Kaua'i	\$1,383.3	6%
Total	\$21,800.7	100%



Public Costs – \$11.2 billion or 51.2%

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Category	Sub-Category	Cost (Millions of \$)	Percent
Direct Budgetary Costs	County Budgets	\$273.7	
	State Budgets	\$505.7	
	State Capital Improvement Program (CIP)*	\$252.6	
	Deferred Maintenance	\$560.2	
	Total	\$1,592.2	14%
Indirect Social & Economic Costs	Injuries and Fatalities	\$3,256.4	
	Congestion	\$693.1	
	Consumer Parking Subsidy	\$1,259.9	
	Greenhouse Gas Emissions	\$209.8	
	Pollution	\$222.2	
	Total	\$5,641.4	51%
Land Value Costs	Parking	\$2,187.1	
	Roads	\$1,738.7	
	Total	\$3,925.8	35%
Grand Total		\$11,159.4	100%

Public costs – \$11.2 billion or 51.2%

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- Direct public costs are the smallest percent
- User fees only cover 49% of the public expenditures
- \$15,000 per taxpayer or \$24,400 household
- Maintenance backlog is 2x state CIP and growing



Private costs – \$10.68 billion or 48.8%

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- Synthetic population for the vehicle model
- Personal costs
 - \$8,100 per vehicle
 - \$16,200 per household

Individual Household Impacts

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- Total household costs \$31,200
- 39% of pre-tax income of median household income

Conclusions

- Full costs matter
- Unsustainable investment strategy
- “Land is expensive for people but not for cars”
- Transportation is a huge part of our cost of living



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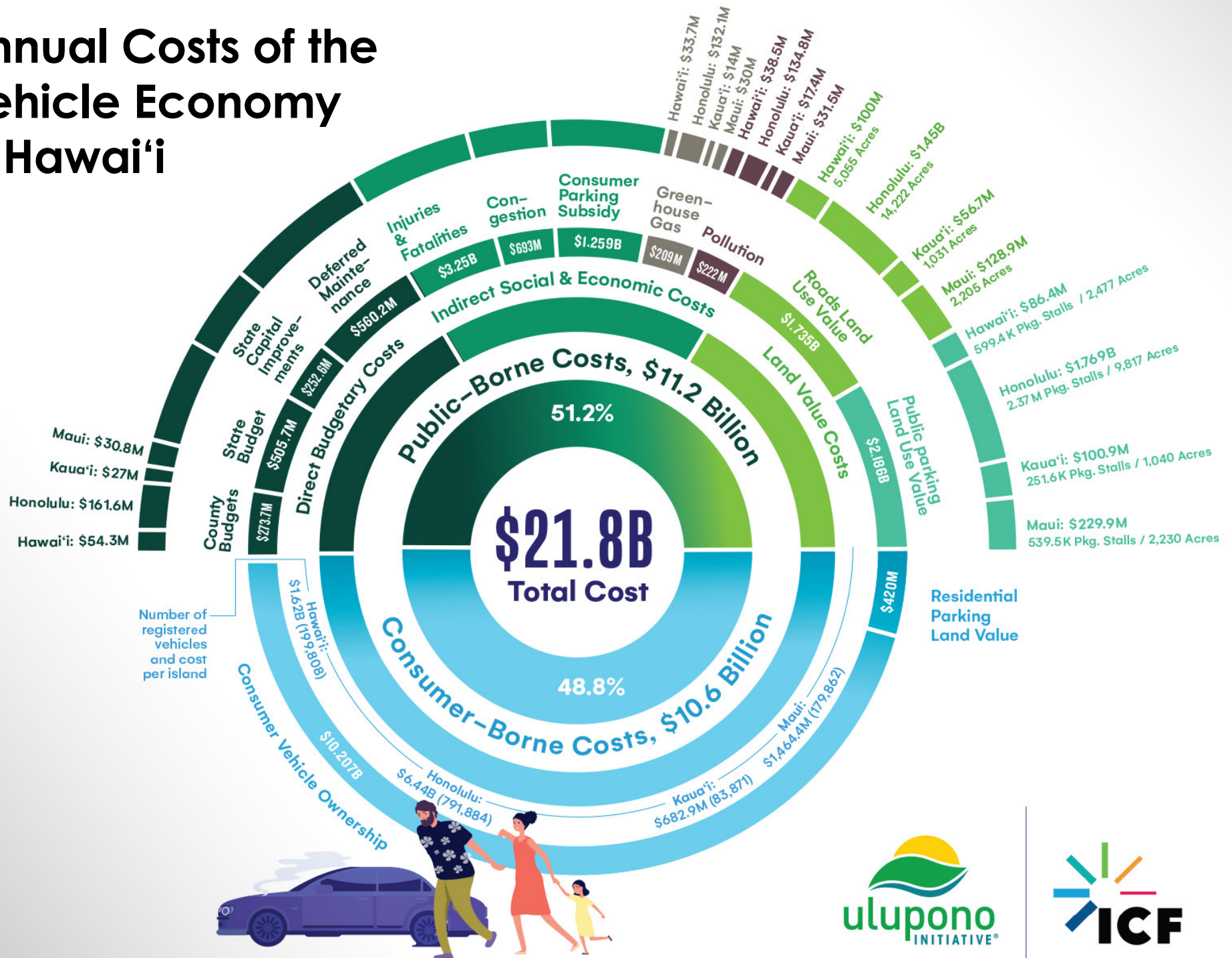
Mahalo!

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Read “The Costs of the Vehicle Economy in Hawai‘i”



Annual Costs of the Vehicle Economy in Hawai'i



Why was our original extrapolation under?

- Land values are more expensive
- Vehicle costs more expensive
- Direct and complete jurisdiction costs



Aerial view of the Aloha Stadium parking lot